

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>F1262P-WO</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/005013</b>	International filing date (day/month/year) <b>07.04.2004</b>	Priority date (day/month/year) <b>07.04.2003</b>

International Patent Classification (IPC) or national classification and IPC

Applicant

**NIPPON STEEL CORPORATION**

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a.  (sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:

sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b.  (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s))

, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/005013

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))  
 publication of the international application (Rule 12.4)  
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished  
 the description:  
 pages 1-10, 12, 13 as originally filed/furnished  
 pages\* 11 received by this Authority on 30.11.2004  
 pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the claims:  
 nos. 1-13 as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

the drawings:  
 sheets fig. 1 as originally filed/furnished  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/JP2004/005013

Box No. V      **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. Statement

Novelty (N)	Claims	1-7, 10-13	YES
	Claims	8, 9	NO
Inventive step (IS)	Claims		YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

Document 1: JP 3204507 B2 (Shell International Research Maatschappij B. V.), 29 June 2001, claims; column 5, lines 42 to 50; column 6, lines 23 to 30; examples; and table 1

Document 2:JP 3313389 B2 (Shell International Research Maatschappij B. V.), 31 May 2002, claims; paragraphs [0001], [0003] and [0016]; and examples

The invention set forth in claims 8 and 9 is disclosed in both document 1 (claims and column 5, lines 42 to 50) cited in the international search report and document 2 (claims) cited in the international search report; therefore, the invention in question lacks novelty and does not involve an inventive step.

The inventions set forth in claims 1, 2, 5 to 7 and 10 to 13 do not involve an inventive step in the light of document 1 or document 2 cited in the international search report. Document 1 discloses the feature of delimiting the sodium content within the silica (column 6, lines 23 to 30) and discloses the feature of supporting Co, Ni, Fe or Ru upon an extrusion carrier (claim 16 and column 10, lines 38 to 40); meanwhile,

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**Box No. V** **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

document 2 discloses the feature of delimiting the content of sodium and sulfur within the silica (paragraph [0016] and the examples); therefore, it would be easy for a person skilled in the art to conceive of delimiting the content of impurities within the catalyst.

Furthermore, there is no support for the assertion that the inventions set forth in the present application will exhibit a "prominent effect" in cases when the content of alkali metals or alkali earth metals within the catalyst is set to between 0.01% by mass and 0.10% by mass, even if the disclosures in the description are taken into consideration.

The invention set forth in claims 3 and 4 does not involve an inventive step in the light of document 1 cited in the international search report. Document 1 (table 1) presents pore sizes, surface areas and pore volumes which are similar to the ranges that are set forth in claim 3. In addition, document 1 (table 1) delimits the crushing strength of the catalyst; therefore, it would be easy for a person skilled in the art to conceive of delimiting the crushing strength of the catalyst by means of an ultrasonic test.